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| 10/573,748 | 03/28/2006 | Demetri Giannopoulos | US030373 | 4310 |

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| EXAMINER |
|---|
| SPAR, ILANA L |

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| 2629 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/573,748 | GIANNOPOULOS, DEMETRI |
| | Examiner | Art Unit | |
| | ILANA SPAR | 2629 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>28 March 2006</u>.
2a)☐ This action is **FINAL**.       2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-30</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-30</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>28 March 2006</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All   b)☐ Some * c)☐ None of:
        1.☒ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
            application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>3/28/2006</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____
5)☐ Notice of Informal Patent Application
6)☐ Other: _____

## DETAILED ACTION

### *Claim Rejections - 35 USC § 101*

1.      35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 21-30 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. Claims 21-30 are directed to an encoded video

signal, which is not encompassed by one of the four categories of statutory subject

matter. Signals, carrier waves, and transmission media are deemed non-statutory.

### *Claim Rejections - 35 USC § 102*

2.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.      Claims 1-7, 11-17, and 21-27 are rejected under 35 U.S.C. 102(b) as being

anticipated by Baer (US Patent No. 3,993,861).

        With reference to claim 1, Baer teaches an apparatus (100,210) that transmits

data (320,330) in a video signal by modulating a brightness level (310) of said video

signal (see column 3, lines 57-62 and column 4, lines 15-24).

        With reference to claim 2, Baer teaches all that is required with reference to claim

1, and further teaches that said apparatus modulates said brightness level (310) of said

video signal during a data transmission period between two row refreshing periods of

said video signal (see column 4, lines 32-35 and column 6, lines 54-62).

    With reference to claim 3, Baer teaches all that is required with reference to claim

1, and further teaches:

    a video display unit that is capable of encoding said data (320,330) into said

brightness level (310) of said video signal to create brightness modulated video images

(200) (see column 4, lines 32-48); and

    a brightness modulated data receiver unit (210) that is capable of receiving said

brightness modulated video images (200) and decoding said data (320,330) from said

brightness modulated video images (200) (see column 4, lines 15-24).

    With reference to claim 4, Baer teaches all that is required with reference to claim

3, and further teaches that said video display unit comprises a brightness level

modulating panel (120) that is capable of modulating said brightness level (310) of said

video signal to encode said data (320,330) into said brightness level (310) of said video

signal (see column 4, lines 32-35 and lines 41-48).

    With reference to claim 5, Baer teaches all that is required with reference to claim

3, and further teaches that said brightness modulated data receiver unit (210)

comprises:

    an optical receiver (220) that is capable of receiving said brightness modulated

video images (200) from said video display unit (100) and detecting changes in said

brightness level (310) of said video signal that represent said data (320,330) that is

encoded into said brightness level (310) of said video signal (see column 4, lines 15-24 and column 6, lines 29-38); and

a brightness modulated data processor unit (230) that is capable of decoding said data (320,330) from said brightness modulated video images that are detected by said optical receiver (220) (see column 4, lines 15-24).

With reference to claim 6, Baer teaches all that is required with reference to claim 5, and further teaches that said brightness modulated data processor unit (230) decodes said data (320,330) from said brightness modulated video images (200) to recreate one of: an audio output, a text output, and a video output (see column 4, lines 20-31 and column 7, lines 13-25).

With reference to claim 7, Baer teaches all that is required with reference to claim 3, and further teaches that said brightness level modulating panel (120) modulates said brightness level (310) of said video signal to encode at least one bit (320) of said data (320,330) into said brightness level (310) of said video signal in a data transmission period between two row refreshing periods of said video signal (see column 6, lines 54-68).

With reference to claim 11, Baer teaches a method for transmitting data (320,330) in a video signal, said method comprising the step of modulating a brightness level (310) of said video signal (see column 3, lines 57-62 and column 4, lines 15-24).

With reference to claim 12, Baer teaches all that is required with reference to claim 11, and further teaches modulating said brightness level (310) of said video signal

during a data transmission period between two row refreshing periods of said video signal (see column 4, lines 32-35 and column 6, lines 54-62).

With reference to claim 13, Baer teaches all that is required with reference to claim 11, and further teaches:

encoding said data (320,330) into said brightness level (310) of said video signal in a video display unit (100) to create brightness modulated video images (200) (see column 4, lines 32-35);

receiving said brightness modulated video images (200) in a brightness modulated data receiver unit (210) (see column 4, lines 15-24); and

decoding said data (320,330) from said brightness modulated video images (200) (see column 4, lines 15-24).

With reference to claim 14, Baer teaches all that is required with reference to claim 13, and further teaches modulating said brightness level (310) of said video signal in a brightness level modulating panel (120) of said video display unit (100) to encode said data (320,330) into said brightness level (310) of said video signal (see column 4, lines 32-35 and 41-48).

With reference to claim 15, Baer teaches all that is required with reference to claim 13, and further teaches:

receiving said brightness modulated video images (200) from said video display unit (100) in an optical receiver (220) (see column 4, lines 15-24);

detecting in said optical receiver (220) changes in said brightness level (310) of said video signal that represent said data (320,330) that is encoded into said brightness level (310) of said video signal (see column 6, lines 29-38); and

decoding in a brightness modulated data processor unit (230) said data from said brightness modulated video images (200) that are detected by said optical receiver (220) (see column 4, lines 15-24).

With reference to claim 16, Baer teaches all that is required with reference to claim 15, and further teaches decoding said data (320,330) from said brightness modulated video images (200) to recreate one of: an audio output, a text output, and a video output (see column 4, lines 20-31 and column 7, lines 13-25).

With reference to claim 17, Baer teaches all that is required with reference to claim 13, and further teaches modulating said brightness level (310) of said video signal to encode at least one bit (320) of said data (320,330) into said brightness level (310) of said video signal in a data transmission period between two row refreshing periods of said video signal (see column 6, lines 54-68).

With reference to claim 21, Baer teaches an encoded video signal (310) generated by a method for transmitting data (320,330) in a video signal, said method comprising the step of modulating a brightness level (310) of said video signal (see column 3, lines 57-62 and column 4, lines 15-24).

With reference to claim 22, Baer teaches all that is required with reference to claim 21, and further teaches that said method further comprises the step of:

modulating said brightness level (310) of said video signal during a data
transmission period between two row refreshing periods of said video signal (see
column 4, lines 32-35 and column 6, lines 54-62).

With reference to claim 23, Baer teaches all that is required with reference to
claim 21, and further teaches that said method further comprises the steps of:

encoding said data (320,330) into said brightness level (310) of said video signal
in a video display unit (100) to create brightness modulated video images (200) (see
column 4, lines 32-35);

receiving said brightness modulated video images (200) in a brightness
modulated data receiver unit (210) (see column 4, lines 15-24); and

decoding said data (320,330) from said brightness modulated video images (200)
(see column 4, lines 15-24).

With reference to claim 24, Baer teaches all that is required with reference to
claim 23, and further teaches that said method further comprises the step of:

modulating said brightness level (310) of said video signal in a brightness level
modulating panel (120) of said video display unit (100) to encode said data (320, 330)
into said brightness level (310) of said video signal (see column 4, lines 32-35 and 41-
48).

With reference to claim 25, Baer teaches all that is required with reference to
claim 23, and further teaches that said method further comprises the steps of:

receiving said brightness modulated video images (200) from said video display
unit (100) in an optical receiver (220) (see column 4, lines 15-24);

detecting in said optical receiver (220) changes in said brightness level (310) of said video signal that represent said data 320,330) that is encoded into said brightness level (310) of said video signal (see column 6, lines 29-38); and

decoding in a brightness modulated data processor unit (230) said data (320,330) from said brightness modulated video images that are detected by said optical receiver (see column 4, lines 15-24).

With reference to claim 26, Baer teaches all that is required with reference to claim 25, and further teaches that said method further comprises the step of:

decoding said data from said brightness modulated video images to recreate one of: an audio output, a text output, and a video output (see column 4, lines 20-31 and column 7, lines 13-25).

With reference to claim 27, Baer teaches all that is required with reference to claim 23, and further teaches that said method further comprises the step of:

modulating said brightness level of said video signal to encode at least one bit of said data into said brightness level of said video signal in a data transmission period between two row refreshing periods of said video signal (see column 6, lines 54-68).

### *Claim Rejections - 35 USC § 103*

4.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.    The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.    Determining the scope and contents of the prior art.
    2.    Ascertaining the differences between the prior art and the claims at issue.
    3.    Resolving the level of ordinary skill in the pertinent art.
    4.    Considering objective evidence present in the application indicating
          obviousness or nonobviousness.

6.    Claims 8, 18, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Baer in view of Hirohashi et al. (US Patent No. 5,600,471).

      With reference to claim 8, Baer teaches all that is required with reference to claim

7, and further teaches that said brightness level modulating panel (120) modulates said

brightness level (310) of said video signal (see column 4, lines 32-35).

      Baer fails to teach that the modulation uses one of: bi-phase amplitude

modulation and asymmetric bi-phase amplitude modulation.

      Hirohashi et al. teaches that said brightness level modulating panel (120)

modulates said brightness level (310) of said video signal using one of: bi-phase

amplitude modulation and asymmetric bi-phase amplitude modulation (see column 6,

lines 58-65).

      It would have been obvious to one of ordinary skill in the art at the time of

invention that various phase modulation schemes can be used with the data modulation

taught by both Baer and Hirohashi et al. It therefore would have been obvious to

incorporate the known modulation scheme of Hirohashi into the apparatus of Baer to

take advantage of the simplicity of the binary modulation scheme.

With reference to claim 18, Baer teaches all that is required with reference to claim 17, and further teaches modulating said brightness level (310) of said video signal (see column 4, lines 32-35).

Baer fails to teach that the modulation scheme uses one of: bi-phase amplitude modulation and asymmetric bi-phase amplitude modulation.

Hirohashi et al. teaches modulating said brightness level (310) of said video signal using one of: bi-phase amplitude modulation and asymmetric bi-phase amplitude modulation (see column 6, lines 58-65).

It would have been obvious to one of ordinary skill in the art at the time of invention that various phase modulation schemes can be used with the data modulation taught by both Baer and Hirohashi et al. It therefore would have been obvious to incorporate the known modulation scheme of Hirohashi into the apparatus of Baer to take advantage of the simplicity of the binary modulation scheme.

With reference to claim 28, Baer teaches all that is required with reference to claim 27, and further teaches modulating said brightness level of said video signal (see column 4, lines 32-35).

Baer fails to teach that the modulation scheme uses one of: bi-phase amplitude modulation and asymmetric bi-phase amplitude modulation.

Hirohashi et al. teaches modulating said brightness level (310) of said video signal using one of: bi-phase amplitude modulation and asymmetric bi-phase amplitude modulation (see column 6, lines 58-65).

It would have been obvious to one of ordinary skill in the art at the time of

invention that various phase modulation schemes can be used with the data modulation

taught by both Baer and Hirohashi et al. It therefore would have been obvious to

incorporate the known modulation scheme of Hirohashi into the apparatus of Baer to

take advantage of the simplicity of the binary modulation scheme.

7.      Claims 9, 10, 19, 20, 29, and 30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Baer in view of Labin et al. (US Patent No. 2,539,440).

With reference to claim 9, Baer teaches all that is required with reference to claim

3, and further teaches said data that said video display unit (100) encodes into said

brightness level (310) of said video signal to create brightness modulated video images

(200) (see column 4, lines 32-35); and

said brightness modulated data receiver unit (210) receives and decodes said

data from said brightness modulated video images (200) (see column 4, lines 15-24).

Baer fails to teach that said data comprises a foreign language audio program.

Labin et al. teaches that it is well known to transmit picture, sound, and color

signals in a single carrier (see column 3, line 37 to column 5, line 5).

It would have been obvious to one of ordinary skill in the art that audio signals (of

any language) can be transmitted as encoded data within the video signals, such that

the device of Baer is able to encode, transmit, and decode an audio/video signal for use

in, for example, a television.

With reference to claim 10, Baer teaches all that is required with reference to

claim 3, and further teaches said data that said video display unit (100) encodes into

said brightness level (310) of said video signal to create brightness modulated video

images (200) (see column 4, lines 32-35); and

said data that said brightness modulated data receiver unit (210) receives and

decodes from said brightness modulated video images (200) (see column 4, lines 15-

24).

Baer fails to teach that said data comprises an audio program for a video

program for which said audio program is not audibly transmitted.

Labin et al. teaches that it is well known to transmit picture, sound, and color

signals in a single carrier (see column 3, line 37 to column 5, line 5).

It would have been obvious to one of ordinary skill in the art that audio signals

(whether audible or not) can be transmitted as encoded data within the video signals,

such that the device of Baer is able to encode, transmit, and decode an audio/video

signal for use in, for example, a television.

With reference to claim 19, Baer teaches all that is required with reference to

claim 13, and further teaches the steps of:

encoding data (320,330) into said brightness level (310) of said video signal to

create brightness modulated video images (200) (see column 4, lines 32-35);

receiving said brightness modulated video images (200) (see column 4, lines 15-

24); and

decoding from said brightness modulated video images (200) said data (see

column 4, lines 15-24).

Baer fails to teach that said data comprises a foreign language audio program.

Labin et al. teaches that it is well known to transmit picture, sound, and color signals in a single carrier (see column 3, line 37 to column 5, line 5).

It would have been obvious to one of ordinary skill in the art that audio signals (of any language) can be transmitted as encoded data within the video signals, such that the device of Baer is able to encode, transmit, and decode an audio/video signal for use in, for example, a television.

With reference to claim 20, Baer teaches all that is required with reference to claim 13, and further teaches the steps of:

encoding data (320,330) into said brightness level (310) of said video signal to create brightness modulated video images (200) (see column 4, lines 32-35);

receiving said brightness modulated video images (200) (see column 4, lines 15-24); and

decoding from said brightness modulated video images (200) said data (320,330) (see column 4, lines 15-24).

Baer fails to teach that said data comprises an audio program for a video program for which said audio program is not audibly transmitted.

Labin et al. teaches that it is well known to transmit picture, sound, and color signals in a single carrier (see column 3, line 37 to column 5, line 5).

It would have been obvious to one of ordinary skill in the art that audio signals (whether audible or not) can be transmitted as encoded data within the video signals, such that the device of Baer is able to encode, transmit, and decode an audio/video signal for use in, for example, a television.

With reference to claim 29, Baer teaches all that is required with reference to claim 23, and further teaches the steps of:

encoding data (320,330) into said brightness level (310) of said video signal to create brightness modulated video images (200) (see column 4, lines 32-35);

receiving said brightness modulated video images (200) (see column 4, lines 15-24); and

decoding from said brightness modulated video images (200) said data (see column 4, lines 15-24).

Baer fails to teach that said data comprises a foreign language audio program.

Labin et al. teaches that it is well known to transmit picture, sound, and color signals in a single carrier (see column 3, line 37 to column 5, line 5).

It would have been obvious to one of ordinary skill in the art that audio signals (of any language) can be transmitted as encoded data within the video signals, such that the device of Baer is able to encode, transmit, and decode an audio/video signal for use in, for example, a television.

With reference to claim 30, Baer teaches all that is required with reference to claim 23, and further teaches the steps of:

encoding data (320,330) into said brightness level (310) of said video signal to create brightness modulated video images (200) (see column 4, lines 32-35);

receiving said brightness modulated video images (200) (see column 4, lines 15-24); and

decoding from said brightness modulated video images (200) said data (320,330) (see column 4, lines 15-24).

Baer fails to teach that said data comprises an audio program for a video program for which said audio program is not audibly transmitted.

Labin et al. teaches that it is well known to transmit picture, sound, and color signals in a single carrier (see column 3, line 37 to column 5, line 5).

It would have been obvious to one of ordinary skill in the art that audio signals (whether audible or not) can be transmitted as encoded data within the video signals, such that the device of Baer is able to encode, transmit, and decode an audio/video signal for use in, for example, a television.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ILANA SPAR whose telephone number is (571)270-7537. The examiner can normally be reached on Monday-Thursday 8:00-4:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571)272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system.  Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


/Bipin  Shalwala/
Supervisory Patent Examiner, Art Unit 2629

ILS